

Interview with Franz Hoskins (1915-2001), officer of World War II submarine USS *Seadragon* (SS-194). LT Hoskins assisted PhM1c Wheeler B. Lipes in first appendectomy performed aboard a submarine. Conducted by Jan K. Herman, Historian, Bureau of Medicine and Surgery and CAPT Robert Bornmann, MC, USN (Ret.), 27 August 1997.

I'd like to ask you a little about your background--how you got into the Navy and became part of the submarine service.

I can tell you a most interesting, unusual story about that. I went to the University of Washington between 1934 and 1938 and majored in health and physical education at that time and graduated with a major in health and physical ed. At the same time you had to take either Army or Navy, so being an avid swimmer and hearing that the Navy went to Honolulu in the summertime on cruises, I opted for that. I took Navy ROTC for 4 years and in 1938 I was commissioned as an ensign in the Naval Reserve along with another 31 men from Washington. At that time we never dreamed there was a war right around the corner. The next year in '39 Hitler was blitzing Poland and the big war was on.

We reserves began getting letters from the Navy in 1940 urging us to volunteer for active duty because there was a national emergency developing. If we volunteered for duty we could pick the branch of the Navy we would like to serve in. Otherwise, if we waited, they would place us where they wanted us.

I was at Ohio State University teaching half time and getting a masters degree in education and I didn't want to break up my education if I didn't have to so I kept postponing any idea of going into the service. And submarines was the last thing I ever thought of.

In early 1941, after receiving a number of these letters, I was shocked when I got a letter from BUNAV (later BUPERS) saying that I was hereby ordered to report to the closest Naval Reserve armory for a physical examination to determine my fitness for submarine duty. I just about flipped when I read that. I knew that submarine duty had always been voluntary. After 2 years of sea duty, then volunteering, and you were lucky enough to get to sub school and complete that training, you were ordered to an active sub for duty. But I was getting these orders directly into the Submarine Service. I thought probably they were just sending out feelers so I procrastinated for about a week, after which I got a telegram that said, "Expedite appearance for exam and send results by dispatch."

I knew by then--early May of 1941, 8 months before the war began--I knew then that they weren't fooling and that I had raised my hand when I got my commission. So I got orders to proceed to San Pedro, CA, and catch the first government transportation to Pearl Harbor and there be assigned to the USS *Sargo* (SS-188). I was in the first wave of reserve officers ordered directly to submarine duty, and in my case, at least, involuntarily--an unprecedented, unheard of procedure at that time.

I had never seen a fleet submarine. I didn't even know that's what the *Sargo* was. The only sub I had ever seen was in '36 when we went on a NROTC summer cruise out to Pearl Harbor on the battleship *New York* (BB-34) and was offered a chance to visit a submarine. So I visited a submarine at Pearl Harbor but they were all S boats--stubby, short, smelly boats in those days. I remember coming out the after engine room and saying, "Man, this is not for me." And that's the only experience I had with a submarine up until that point. I never saw a sub in between then and 1941 when I was called to sub duty. So I didn't know quite what to expect. I didn't realize that a wonderful quirk of fate was sending me to an outfit that would expand from practically an unheard branch of the Navy into the most successful branch as far as sinking ships

went. Our subs sank over 66 plus percent of all Japanese merchant vessels sunk, and over 30 plus percent of all Japanese naval vessels sunk.

When I reported for duty, I went to Honolulu. The submarine *Sargo* was down at Lahaina Roads just off the island of Maui. They flew me from Ford Island down to Lahaina and they picked me up at a wharf about 6 o'clock in the evening. As I went out to the sub, I began to look at that thing. It was a lot longer and bigger than I ever thought it would be. Those little S-boats were about 240 feet. This boat was 310 feet long and sleek. I climbed up the side and, as I was standing on the deck looking it over, the young coxswain who brought me out asked if I was familiar with these big boats. I told him I wasn't. So he took me down below to introduce me to the captain.

I went down below where the captain and his four other Naval Academy graduate Naval officers on the boat were sitting around the wardroom table just finishing dinner. The captain stuck out his hand and said, "Well, welcome aboard, Hoskins. How was sub school?"

I said, "Sub school sir?"

"Hell, you just came from there didn't you?"

I said, "No sir."

"Then where did you come from?"

I said, "Ohio State in Columbus, Ohio."

Then the engineering officer piped up. "Oh, they've got an engineering school. That's where you were, wasn't it?"

I said, "No."

The torpedo officer chimed in, "There's a torpedo station nearby. Is that where you were?"

"No."

So the captain said, "Well what were you doing at Ohio State?"

And I said, "Taking a masters degree in education."

He looked at me and said, "What's this submarine Navy coming to?" And then he went on to say that all the skippers received advanced notice that they were going to receive a reserve officer and to see if this individual had aptitude for submarines. But he thought certainly that he was coming from sub school.

I said, "Captain, these are the orders I got. I just came on the basis of these and if I can fit into your organization I will do my darndest to pull my oar."

He said, "That's all you can do, Hoskins. I'm going to turn you over to the executive officer."

The exec said, "I'm going to make you assistant electrical and engineering officer and, of course, commissary officer. (the lowest officer on the boat). I'm going to have you navigate with me and teach you how to navigate." Well, I did know something about navigation so I didn't worry about that.

Well, that was my introduction to submarines and I must say, I got the best one on one education you could ever get in the Navy. Within a month, they had me diving and surfacing that boat and all kinds of things. And as you know, you just don't get your dolphins the moment you get out of submarine school. You have to earn them by making drawings of all the systems on the submarine and then demonstrating to one or two of the officers that you know these systems and that you can go to any compartment and show anybody where certain valves are. And in case you were in a compartment and the submarine was in difficulty, you'd be able to,

with all your knowledge about this sub, pull it out by blowing the right valves or executing whatever procedures were necessary to save the boat.

By the end of the summer of 1941, we were still operating in Pearl Harbor. In mid-October our whole squadron--12 boats--got orders to Manila. In early November we arrived there to join the other 12 fleet boats plus five other S boats out there. The *Seadragon* was one. LT Bub [Norvell] Ward was executive officer. The war began a month later on December 8 out there. It was extremely tough early in the war there because our subs had never been to war before. We had no radar and we were forced to go without any running lights at night and there were no land lights to help us navigate. The Philippines has something like 15,000 islands. South of that, the Dutch East Indies has another 8,000 islands. So here we were at night just scared to death. We had never been to war, no U.S. sub had ever fired a torpedo and we didn't know what to expect. We didn't know whether the Japanese had super good, efficient anti-submarine people or whether they were below our standards. So you can be sure there was a wave of fear that swept through that whole Asiatic Fleet out there.

Of course, the Asiatic Fleet, affectionately known as the "suicide fleet, was dismally small in number. There were only about seven ships out there, with the USS *Houston* (CA-30), the heavy cruiser, the biggest. And 14 old destroyers, a couple of light cruisers, and a few auxiliary ships, a converted aircraft tender, an oiler, and the USS *Holland* (AS-3), our submarine tender. If we lost that ship, we would have been in terrible shape because we had no place to go for provisions, supplies, repair facilities, etc. Out in the Far East it's 3,800 miles to Tokyo and 6,000 (to the Philippines) depending on where you are. And Manila Harbor was the only base we had at that time west of Midway Island (in the mid Pacific Ocean).

Within that first 3 months, the Japanese just swept all over that whole Indochina area. Within 3 months, they had everything north of Australia all the way over to the Solomon Islands, including Guadalcanal. And they were bombing the north coast of Australia. We were forced south 3,000 miles over the next 3 months, although we were on patrol all the time back and forth. We worked out of Surabaya, Java primarily, those early months. After 3 months we ended up at Perth, Australia in early March, 1942, which became the biggest submarine base in the Southwest Asia area some 3,000 miles from Manila, P.I.

I've gone into all this to give you some background. From Perth, we'd operate northward and we'd have to go about 1,800 miles to the Lombok Straits which is in the Dutch East Indies and then we'd still go further north about another 1,000 miles until we got to a place called Palawan Passage between Borneo and the Philippines and then go west into the South China Sea. And it was in this area, just north of Borneo, where this sailor became ill.

When did you transfer to the *Seadragon*?

In early March 1942, 3 months after the war started, most of our submarines ended up in Perth, Australia. As you probably know, the *Seadragon* (SS-194) had been in Cavite Navy Yard near Manila for an overhaul, right next to the *Sealion* (SS-195). An ironic thing about that is the *Seadragon* was outboard on the 8th of December when the war began. And the *Sealion* was inboard. But the *Seadragon* had some openings in the top of the hull because they had some engine work done. As a result, they shifted the *Seadragon* inboard the next day, December 9, and the very next day the Japs bombed Cavite Navy Yard and just made a catastrophe out of that naval repair base. The *Sealion*, which was now outboard, took two direct hits killing four enlisted men. The *Seadragon* would have been right in that place if they hadn't moved it. However, the shrapnel blasted upward and outward in an inverted cone. About 15 pieces

penetrated *Seadragon's* conning tower and ripped right out the opposite side killing ENS Samuel H. Hunter, Naval Academy graduate of 1938. He was the first ever submarine officer killed in warfare.

Where were you during the attack?

I wasn't aboard the *Seadragon* at that time. I was on the *Sargo* and we were out on patrol. It was 3 months after the attack on Cavite that I joined the *Seadragon*. The *Seadragon* came into Perth and right away the skipper was screaming for another officer to take the place of ENS Hunter who had been killed at Cavite. Just by pure chance Hoskins was selected to go to the *Seadragon* and I never realized what an amazing promotion that meant because on the *Seadragon* they had the captain and only three other officers. The second officer, LT "Bub" Ward, being the exec, was the navigator. He usually never stood any watches, although he was having to stand watches the first 3 months because they didn't have enough officers after losing Hunter.

So I came aboard and right away I became a senior watchstander because that's all they had was three officers plus and exec and a skipper. I had a lot of increased responsibility placed on me right away, which was good for the experience.

How did you find the *Seadragon* different from the *Sargo*?

They were both late fleet submarines. *Sargo* was SS-188 and *Seadragon* was SS-194. They were practically the same. They both had six torpedo tubes forward and four aft and pretty much everything was the same. So it was an easy transition from that standpoint but I still studied the *Seadragon* when I got there.

Had you qualified before then?

That's an interesting thing--yes. In November of 1941, before the war started, the skippers all got a letter from BUNAV --its now BUPERS as you know--saying that now was the time for those skippers who had reserve officers showing appropriate aptitude for submarine training to send them back to sub school. Well, all the skippers out there came down hard on that idea. "My God, our guys have had so much individual training they're way way ahead of anybody going to sub school so we're not sending anybody back 6,000 miles." Then, of course, the war started very shortly after that.

Going back to June, 1941, another officer came aboard the *Sargo*, a fellow named Conde Reguet. He was a 1938 Annapolis graduate but he came aboard the *Sargo* a month after I did. We worked hand and hand on notebooks and quizzing each other. So shortly after the war began, we had been quizzed by the other officers on the various systems--how to start an engine and what makes a torpedo run, and all that's required. About a month after the war started, Captain Jacobs said, "You two guys are as qualified as I expect you to be so I'm going to recommend you to be qualified in subs." So in January 1942 I was qualified in submarines.

Did that affect your submarine pay, or did you get submarine pay whether you qualified or not?

We did get submarine pay. As an ensign, I got \$125 bucks a month if you were single. You got \$32 more if you were married, and you got, I think, \$20 more for sub pay.

Were you married at that time?

No. I wasn't married until after the war. Marriage did not affect one's sub pay.

In early January, when I was a senior ensign, I was jacked up to lieutenant j.g., and by summertime they upped all of us guys in that class--'38, '39--to full lieutenants. Two years later, we all became lieutenant commanders. It was amazing. It was just the way things were escalating at that time.

When you were on patrol either with the *Sargo* or the *Seadragon*, did you have any experience with those faulty torpedoes?

Oh, God, did we ever. *Sargo's* first patrol lasted 46 days and we ended up in Surabaya, Java. We fired 13 torpedoes on that patrol and got not one hit! And we were shooting at ships that didn't even have escorts at first. The captain could see the bubbling wake of those torpedoes go right underneath the ships. And we were setting them according to what they called an impulse detonator, which was supposed to be a fancy, secret thing. As the torpedo passed beneath the ship, the magnetic field was supposed to trigger and detonate the charge. And because it would explode under the keel, they thought it would do more damage than if it hit the ship in the side. But the exploder mechanism failed and it never did a damn thing. It was found out later that the torpedoes were running much deeper than they were supposed to. The Naval Bureau of Ordnance (BUORD) back in Washington, DC, was guilty for not tracking down all that stuff. Our skipper, along with all the other skippers who were having tremendously poor luck and becoming totally frustrated, wrote letters to and discussed it with the admirals. In turn, the admiral of COMSOUWESTPAC notified BUORD that the fish were not running properly. And, of course, at BUORD they would just not accept that. They said the skippers were not making good runs and proper approaches and all this and that nonsense.

That went on for a year or so till they were able finally to do some true experimenting. Out there in Australia the admirals said they were going to find what's wrong even if BUORD doesn't. So in Albany, Australia, they set up a screen out in one of the bays and fired torpedoes at this screen. They found that a fish set at 11 feet actually went into the screen at 22 feet after it had run its course. They did enough testing to determine that the fish were running about twice as deep as what they were set at. And the magnetic exploder wouldn't work. And furthermore, the mechanical exploder wouldn't work well either if a fish hit at 90 degrees. If it hit at an angle other than 90 degrees, it had a lot more chance of going off--about a 50 percent chance of going off.

Those aren't great odds either, are they?

Oh, my God, it was terrible. But at least some of them did go off because during that first year when I was on the *Seadragon*, we sank 10 ships, including one Jap sub. We really had the best record out there that first year.

But it was tough that first year. As Commissary Officer, I couldn't get the usual provisions of food and that sort of thing. In Java we had to scrounge around for milk and other essential staples. I wouldn't buy vegetables for the ship because they were all fertilized with human fertilizer, which I learned in a hurry. And the milk was not pasteurized so we got powdered milk. And we got flour and rice, and mutton from Australia. The only thing we got from the U.S. was canned Spam, which everybody got tired of in a hurry.

And communications were terrible too. That whole Asiatic Fleet was in chaos. You couldn't move fast enough. You never knew where the headquarters were to keep up. And certain code letters changed every 8 hours for recognition. We couldn't keep up with those because we couldn't get the publications fast enough. We didn't get personal mail out there until

5 months and a week after the war began. We got our first mail in May of 1942--Christmas cards from the Christmas before. People don't understand how much chaos was involved out there and how little contact we had with Pearl Harbor. The first submarine we saw from Pearl Harbor was in May of '42, when it came out to start relieving some of us.

How did you find the crew on *Seadragon*?

The crews on all the subs I was on were A number one guys. Submariners are just that way, especially when you all went through a few harrowing experiences. It just seemed to weld the crew together into a large, tight family. Even today we have an annual submarine convention. The next one is in October. The guys just love to get together and BS about what went on and they have such strong relations; it's just unbelievable. Of course, when I came to *Seadragon* the crew was all regular Navy guys. They'd been on board for 3 years. The boat was commissioned in '39 and by now it was '42. We didn't have a reserve on there except me.

What do you recall about that famous day in the South China Sea when Darrell Rector came down with his now famous appendicitis.

As I said, we were operating out of Perth, Australia so we had to go about 1,800 miles north to Lombok Strait, in the Dutch East Indies. Once we got through there, we had to continue north through Makassar Strait, another 1,000 to 1,100 miles, and then turn west through Palawan Passage into the South China Sea, just north of Borneo. When we were going up to Makassar Strait, the pharmacist's mate came to me. He used to come to see me quite often because he knew I was a health and physical education major and also was a first aid instructor. So he knew I had a basic understanding of health. He told me one of the fellows back aft had a semi-acute belly. He said he had the man in bed but had the sneaking suspicion that because he was more sore on the right than the left, that he might have appendicitis. I told him to tell the captain and executive officer about it. Of course, he daily reported to the captain if he had anybody ill or on the binnacle list.

Well, he reported to the captain who told him to do whatever his book said. Lipes then iced it down for a day or so. And you have to remember now, here we are about 2,000 miles from Port Darwin, Australia. We had heard there was a naval base there but we didn't know whether they had any facilities or surgeons, or anything else that could help us. But we were 10 days away from there. In those days, subs went on patrols individually. Once you were underway, you were an autonomous unit. Anything that went bad, you had to fix, machinery wise or personnel wise. Lipes was icing the seaman's belly down for a day or so and he came to me and said, "That guy is worse. The pain has really shifted to the right lower quadrant. I've been icing it down but he can't eat or anything. He's sicker than hell and has a fever. I'm going to the captain and see if he'll go along with our trying an appendectomy." I said, "An appendectomy! God, who's going to do that?" He said, "I've seen a couple; I think I could do one."

I said, "Man, that's a tremendous undertaking for somebody who hasn't had a doctor's training." Then he said, "Well, what are we going to do? We're 2,000 miles away from the closest naval base." He was right. And, of course, there were no allied aircraft out there that could come in and try to pick up Rector.

So Lipes went to the captain and the skipper just about flipped his lid too. An appendectomy! Who ever heard of that on a submarine? Lipes then said, "Well, this guy's liable to get a perforated appendix and die of peritonitis if we don't do something."

The captain said, "Well, keep icing it down and let me think about this. This is a major decision I will have to go with. I'll be called on the carpet when we get back to explain things, especially if things don't go right."

So the guy remained in an acute state and Lipes checked him out using rebound tenderness. You press down on the belly firmly and you let go. If there's any inflammatory area inside, it bounces up against the inner abdominal wall causing excruciating pain. And that was what was beginning to happen. He was yelling, "My God, don't do that anymore!" It was a pretty good clue that he had a very acute appendix, especially because it was in the right lower quadrant.

Lipes was becoming more convinced than ever that Rector had an acute appendix. I knew enough about anatomy--I hadn't taken dissecting anatomy but I had had lecture anatomy--so I knew the internal abdomen fairly well.

So Lipes went back to the captain and told him, "Captain, I think we've got to operate. I think this is the only chance this guy's got. Finally the captain said, "Okay. Lipes added: We certainly can't get anyplace for help in time to do any good and if this breaks, he's going to get peritonitis and he's going to be gone within a few days to a week or so." You've got to remember that we didn't have antibiotics except sulfa tablets in those days and nobody was using those internally for anything like appendicitis.

Finally the captain said, "If you think you can do it, Lipes, talk to the patient about it." Lipes talked to Rector and who said, "I don't know what else to do, go ahead doc."

By now, Rector was pretty darned sick and Lipes came to me and said, "The captain says I've got the go ahead to do an appendectomy. How about you giving the anesthetic?"

I said, "The anesthetic? My God, I don't know a thing about an anesthetic!" And he thrust his Navy medical book to me and says, "Look, here's the appendix. It tells all about anesthesia by drop ether. Read it."

So I did and the more I read it the more I thought if I had to do it I could do it as well as anybody so I said, "Well, Okay; I'll do my best to help out, if that's what you want." So that's the way I ended up as anesthesiologist.

Who came up with the idea for using the inverted tea strainer for an anesthesia mask?

Oh, that just sort of came up naturally. You had to have something to do it with and we had to start thinking about tools and instruments. We didn't have any special apparatus. I don't remember who thought of it. I may have thought about that myself or Lipes. I really don't know who did. It may even have been in the book that you put an inverted strainer with gauze in it over the guy's face and then you drip the ether on the gauze. But it was simple to get a small tea stainer out of the galley and put some gauze in it.

I read this thing over in the appendix about giving anesthesia and, of course, it went into detail. The first minute you try to give 12 drops a minute. The second minute you go to about 18 drops a minute, and the next minute about 24. By then the guy should start getting restless and going through a stage of excitation and thrashing. You have to hold him down and so forth, and keep on giving it to him. Finally he will be subdued and finally relax. It told about watching the pupils of the eye.

When it came time for the operation, I asked Lipes how much ether he had. He said he had four cans. Each was a pound can about 4 inches tall. I gave a can to one of the machinist's mates and said, "Hey, Mac, put a hole in this thing for me." So he put a hole in but there was

nothing in the book where it said anything about preparing a can of ether. So when I started giving the anesthetic I tipped the can up thinking drops were going to come out and instead it squirted out. I thought, Oh, my God, this isn't right at all. What am I going to do? So I had to back off and tip it trying to get a drop at a time. But, it just didn't work that way; it squirted out, probably 10 drops in one squirt. So I just had to improvise as I went along. To make matters worse, every time ether would squirt out suddenly we got ether in great concentration all through that wardroom. And because of the circulating system, it gradually went throughout the entire boat to the point that in the middle of the operation, that submarine smelled like a concentrated operating room.

Let me tell you a little about the instruments. Lipes was a pretty doggone improvising guy. He also was a real gutsy guy who thought he could do an appendectomy when he'd never done one. My God! It proves that when the chips are down, you can do a lot more than you ever thought you could.

We made muscle retractors out of bent cooking spoons from the galley and they kept hot water going to sterilize the instruments once they'd been used. We put a battle lantern in the wardroom overhead so we'd have good light. And we took our pajamas, which we never wore anyway, and dipped them in torpedo alcohol and wrung them out and had some of the guys push them over us. It's hard to get anything wet over you. So we had these pajamas on us backwards so we could provide as sterile a field as possible.

Lipes had somehow gotten some rubber gloves and stashed them away just like he stashed that ether away. They hadn't issued ether as a general rule; he had cumshawed it from somebody, probably from the pharmacist's mates aboard the tender. As I said, he was so inventive in some of his ideas about medicine.

We did the operation on the wardroom table, which was just long enough--about 5 1/2 feet--to get a guy on. I was backed up against a bookcase in the wardroom, where I couldn't move--right above Rector's head so I was getting that ether full blast as it came up when I squirted it out. Rector's feet were down at the bottom resting in a chart drawer. Bub Ward was in there with Lipes crowded up against the rounded overhead of the wardroom. The engineering officer, Chales S. Manning, Academy '36, was the circulating nurse. And the captain couldn't stand the sight of blood so he said, "I'll sit out here in the companionway where I can't see what's going on and I'll take notes. So that's what he did.

Once we got everything lined up, Lipes had fixed up a scalpel. He had some scalpel blades but no handle. He had some hemostats and catgut, but most of the stuff was pretty much improvised.

So, here we were ready to go. As I said, when I was ready to give the ether, the darned stuff came out in a stream. I had to make some mental corrections right away. I couldn't control the drops coming out so what I'd do was just give it a squirt onto the gauze and tip the can right up again and make an estimate.

After a minute or two he started squirming around and the fellas knew that he was about to get restless and thrash around. All the time we had this medical book and one of the fellas was reading it to us. "Hey Mac, read us the part where it says he's going to get restless. Now what am I supposed to do about the pupils. Well it said to watch the pupils of the eye. If he goes under, they will kind of pinpoint, then they'll dilate again and that will mean he's too deep or too shallow. So that was a hard thing to evaluate.

But I kept giving him the ether and pretty soon he got quiet. I was watching his eyes and his pupils got real big. I was afraid that he might be getting too deep and I didn't know what the

hell to do. Should I give him more or less? But all of a sudden if he'd start moving, I splash the ether to the tea strainer with the gauze in it. And all the time these fumes were coming up right in my face and then the blowers were picking it up and pushing it throughout the entire boat.

As we went on I began to learn a few things about giving an anesthetic. Lipes would say, "Hey, hey, he's starting to wake up. So I'd begin giving him the ether again. I conceived the idea that if I slipped my hand down under his gown on his chest, just on the xiphoid process, which is at the top of the abdomen, without getting into the surgical field--if I felt those muscles, as soon as I felt those muscles getting a little bit relaxed, I knew he had enough ether. As soon as they started getting taut, that meant he was waking up a bit, so I'd put the ether to him again. By golly, that method really worked for me. Every now and then, Lipes would say, "Hey, I can't even get in the opening here, he's tightening up so much." You see, the muscles would tighten up and Bub Ward, the assistant surgeon, would have to strain like mad to get those muscles to open up because this guy, Rector, was a football player and had a well-muscled abdominal wall. He was a well built stocky kid with tough muscles.

Anyway, that was one of the most helpful things I learned giving the anesthetic. We went on and on and Lipes was digging for the appendix and he just couldn't find it. I was encouraging him. "Have you got the caecum in sight yet?" That's the first part of the large intestine in the right lower quadrant. He says, "Yea, but I can't see any appendix here at all." He kept looking around and he was real ginger about this whole thing. But before long, we had most of his intestinal tract out on his belly, which is a no no. Usually, after manhandling the intestinal tract, a guy will have a lot of inflammatory reaction and pain just from that post-operatively.

Well, we didn't know what else to do. Finally, he said, "Here's the appendix way up behind the caecum." That's not the normal position. The appendix was adhered to the back part of the caecum. He freed it up from the adhesions, put a catgut ligature around it, tied it tight, and, carefully cut it off with a sterile fingernail scissors and took it out. After he tied it off, he took some torpedo alcohol and cleaned the stump and dropped it back in. Lipes had learned that if you took sulfa tablets and ground them up, you could make a powder and use it in the wound as an antibiotic, antiseptic material. I don't know who got that idea but the Army was using sulfa powder on shrapnel and bullet wounds.

So we ground up some sulfa and Lipes sprinkled it in the wound as we came out. Everything went pretty much according to Hoyle. It was unbelievable. As I think back, I realize how lucky we were. In giving him the anesthesia, Rector might have become nauseated and started throwing up. We had no aspiration equipment whatsoever to suck him out. We would have had to turn him over and get the material out of his mouth so he wouldn't aspirate it into his lungs. We could have had a terrible mess. But we were just so fortunate that everything went just great.

After 2 1/2 hours we had him to the point where Lipes was sewing him up and the captain was keeping a check of all the spoons and that sort of thing.

Did you get to see the amputated appendix?

Oh sure. It looked to me like it was inflamed. I know that later some people questioned whether it was that acute but I was convinced it was. But I never saw it after he put it in the bottle. They took it over to the tender as soon as we got in. But there was no question that the guy had acute appendicitis as far as I'm concerned from my later medical knowledge. After we finished up, they laid the guy in LT [Charles] Miller's bunk and within half an hour Rector was

waking up and everything was fine. But I had the worst headache I'd ever had after breathing in all that ether.

How about the rest of the operating crew? How were they feeling?

They were feeling a little giddy. In a submarine, as you stay down, the pressure in the boat increases a little bit because you're leaking in a certain amount of water through the exhaust valves. When you leak that water in, it takes the place of air in the boat and it compresses that air a little bit and you get 1 or 2 square inches of pressure. That makes quite a difference but you don't particularly notice it if everything is normal. But when we opened the upper conning tower hatch to the outside that night when we surfaced, that vented out the extra pressure in the boat which then decreased the pressure in our blood streams. Each one's blood stream carried the ether into his lungs, and that made everybody giddy, just like a cheap drunk, for a minute or two. It was the funniest thing you can imagine, but it was absolutely true.

After that Rector recovered in good shape. I can't think of anything that was abnormal whatsoever. In a week or two, he was back on station. When we got back into port, this war correspondent, George Weller, had heard about the submarine doing an appendectomy. Well, he was waiting for us on the dock. We got in there about noon and he came aboard and introduced himself and told us that he had permission from the Commander, Southwest Pacific to do a feature article on the submarine appendectomy. Since it was lunchtime, we invited him to have lunch with us and each of us told him a little bit about our part in the operation. We all sat around the wardroom and rehashed the thing for him. There must have been about 15 guys involved in the thing, guys who were runners back and forth from the galley and such. He took notes and wrote up a very clever article.

I don't suspect that George Weller is still around.

Yes, he is. I wrote him a letter a couple of years ago trying to get him to come to our *Seadragon* 50th reunion of our historical appendectomy. He was in Greece with his son and he said he was so sorry that he was committed to going out with his son scuba diving looking for some old relics. This was about actually 5 years ago in 1992 and he was alive then. He'd be a great guy to interview. Anyway, as I said, he came aboard and we gave him the best details we could and he wrote that article and it was a big hit.

The aftermath of the appendectomy, of course, was George Weller's story. As a crew, were you all treated any differently after that?

I don't think that made too much difference. I think the people who heard about this kind of looked up to the *Seadragon* for its resourcefulness and daring to perform such a surgery. Weller's story caused quite a stir because they could print that. They never printed much about submarine operations; we were called the "Silent Service." We didn't want anybody to know where we were or what we were doing. Weller's story was so unusual. It was printed in *Life*, *Reader's Digest*, even in Spanish. It was amazing!

How long were you on the *Seadragon*?

I was on the *Sargo* 10 months and in March of '42 I was transferred to the *Seadragon* and spent 28 months on that boat working my way up from the first lieutenant all the way to executive officer. In June of '44 they sent me to New London where I was commanding officer of one of the big submarines there for 6 months. Then they flew me to Panama to become

executive officer of a brand new sub, the *Trutta* (SS-421). I made one run as exec and then became the proud skipper of the *Trutta* in the last 6 months of the war. I was only one of six reserves that was given the privilege of commanding a war patrolling submarine.

Are there any of the *Seadragon's* officers left besides you and ADM Ward?

RADM Norvell Ward and myself are the only two left from that original *Seadragon* officer group.